1. Write a machine-language program similar to the one on page 1-10 of the course notes. Your program should add the values stored at even addresses between 0 to 9 and subtract from this, the sum of the values stored at odd addresses between 0 and 9. Use the “decimal” version of the machine language, as shown.

2. Write a machine-language program to convert an internally scored value to the corresponding sequence of ASCII character codes (see page 1-23 of the notes). Use the “hexadecimal” version of the machine language as on pages 1-21, 1-22.

3. Construct a timing diagram for the circuit shown below, assuming inputs ABC are all low from time 0 to 10, ABC=LLH from time 10 to 20 (where L denotes low, H denotes high), ABC=LHL from time 20 to 30, ABC=LHH from time 30 to 40, ABC=LLL from time 40 to 50, ABC=HLH from time 50 to 60, ABC=HHL from time 60 to 70, ABC=HHH from time 70 to 80.
4. Construct a truth table for the following circuit: